

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 November 2005 (03.11.2005)

PCT

(10) International Publication Number
WO 2005/102933 A2

(51) International Patent Classification⁷: **C01G 25/00**

(21) International Application Number:
PCT/JP2005/008464

(22) International Filing Date: 27 April 2005 (27.04.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004-131619 27 April 2004 (27.04.2004) JP

(71) Applicant (for all designated States except US): **TOYOTA JIDOSHA KABUSHIKI KAISHA** [JP/JP]; 1, Toyotacho, Toyota-shi, Aichi, 4718571 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MIURA, Masahide** [JP/JP]; c/o TOYOTA JIDOSHA KABUSHIKI KAISHA, 1, Toyotacho, Toyota-shi, Aichi, 4718571 (JP). **KUNO, Oji** [JP/JP]; c/o TOYOTA JIDOSHA KABUSHIKI KAISHA, 1, Toyotacho, Toyota-shi, Aichi, 4718571 (JP).

(74) Agents: **AOKI, Atsushi** et al.; A. AOKI, ISHIDA & ASSOCIATES, Toranomon 37 Mori Bldg., 5-1, Toranomon 3-chome, Minato-ku, Tokyo 1058423 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

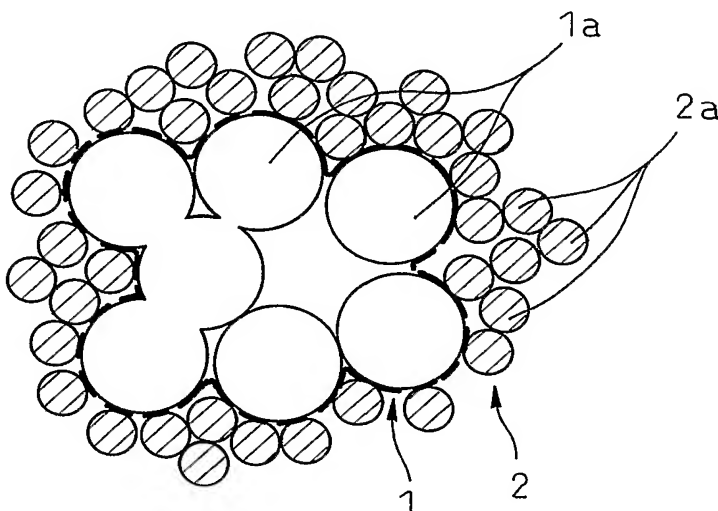
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METAL OXIDE PARTICLE, PRODUCTION PROCESS THEREOF AND EXHAUST GAS PURIFYING CATALYST



(57) Abstract: The present invention provides a metal oxide particle for a catalyst support comprising multiple species of metal oxides and capable of satisfactorily exerting the properties of the respective metal oxides, and also provide a production process therefor and an exhaust gas purifying catalyst obtained from this metal oxide particle. A metal oxide particle of the present invention comprises a core part 1 relatively rich in a first metal oxide and a surface layer 2 relatively rich in a second metal oxide, the core part and the surface layer each comprising a plurality of primary particles (1a, 2a), and the primary particle diameter of the second metal oxide being smaller than the primary particle diameter of the first metal oxide.